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(54) Title: POLYMERIZATION PROCESS INVOLVING THE DOSING INITIATORS

(57) Abstract: The invention relates to a polymerization process wherein at least one peroxide, with a half life in between 1 hour and 0.001 hour at the polymerization temperature at the moment of dosing, is dosed to the reaction mixture at the polymerization temperature and wherein at least during part of the period in which the peroxide is dosed i) the cooling means of the reactor are kept at essentially maximum cooling capacity and ii) the amount of initiator that is dosed is actively controlled such that the desired polymerization temperature is achieved and maintained within 0.3°C of said polymerization temperature.